

GP-304127

TWO CLUTCH FIXED-RATIO EXIT CONTROL FOR MULTI-MODE
HYBRID DRIVE

ABSTRACT OF THE DISCLOSURE

An electrically variable transmission has a pair of clutches and a first mode when the first clutch is applied and the second clutch released, a second mode when the second clutch is applied and the first clutch released,
5 and a fixed-ratio mode when both clutches are applied. Upshifts and downshifts out of fixed-ratio are accomplished in accordance with a control based upon shift confidence factors determined in accordance with proportional and derivative input speed error quantities. Additional authority limits are placed upon the shift confidence factors in accordance with output
10 speed derivative quantities. Additional override downshift control is provided in accordance with additional input speed condition determinations.